

REMARKS

Status of Claims

The present substitute Amendment is being filed in response to a Notice of Non-Compliant Amendment mailed February 10, 2006. The Amendment originally was mailed together with a Request for Continued Examination under 37 C.F.R. 1.114. This Amendment has been revised to provide a formal section entitled Amendments to the Specification, as requested in the Notice.

Claims 1 and 11-18 are pending in this application, the independent claims being claims 1 and 11. By this Amendment, the specification and claim 1 are amended, claims 3, 5 and 7-10 are canceled, and claims 11-18 are newly presented. Claims 2, 4 and 6 previously were canceled.

Summary of Official Action

In the Official Action, the specification was objected to on formal grounds. Claims 1, 3, 5 and 7-10 variously were rejected under 35 U.S.C. 112, first and second paragraphs, as not enabling for the claimed invention, failing to comply with the written description requirement, and/or indefinite. Claims 1, 3, 5 and 7 10 were rejected under 35 U.S.C. 102(b), as anticipated by U.S. Patent No. 4,155,767 (Specht).

Reconsideration and withdrawal of the objection and rejections respectfully are requested in view of the above amendments and the following remarks.

Formal Amendments

Without conceding the propriety of the formal objection to the specification, the specification has been amended to provide substitute/clean chemical formulas in paragraph [0063] at pages 9-11, as requested by the Examiner, as clarified by the Notice. No new matter has been added.

Claim Amendments

The formal rejections and the rejection of the claims over the cited art respectfully are traversed. Nevertheless, without conceding the propriety of the rejections, claim 1 has been amended to delete the language objected to by the Examiner, claims 3, 5 and 7-10 have been canceled, and newly presented claims 11-18 have been added to provide Applicants with additional scope of coverage commensurate with the disclosure. Support for the amendments may be found in the original application. No new matter has been added.

Claimed Invention

The present invention relates to a novel method for producing a film on a substrate. In one aspect, as recited in claim 1, the claimed invention relates to a method for forming a film on a substrate, comprising discharging a liquid material from a nozzle of a head to the substrate to form a film on the substrate, the liquid material including a solvent and a solute, the solvent including a heterocyclic compound, the heterocyclic compound having a furan skeleton, a boiling point of the heterocyclic compound being greater than 170 degrees centigrade, and the solvent including a benzene derivative.

In another aspect, as recited in new independent claim 11, the claimed invention relates to a method of forming a film on a substrate, comprising discharging a liquid material from a nozzle of a head to the substrate to form a film on the substrate, the liquid material including a solvent and a solute, the solvent including a heterocyclic compound, the heterocyclic compound having a furan skeleton, and a boiling point of the heterocyclic compound being greater than 170 degrees centigrade.

Prior Art Distinguished

Applicants submit that the prior art fails to anticipate the claimed invention. Moreover, Applicants submit that there are differences between the subject matter sought to

be patented and the prior art, such that the subject matter taken as a whole would not have been obvious to one of ordinary skill in the art at the time the invention was made.

The Specht '767 patent relates to jet ink compositions containing tetrahydrofuran solvents, and discloses ink compositions suitable for use in ink jet printing on coated or uncoated substrates to form images that are highly resistant to abrasion and penetration by virtue of the penetrating characteristics of a select solvent system. However, Applicants submit that the Specht '767 patent fails to disclose or suggest at least the above-discussed features of the claimed invention. In particular, Applicants submit that the Specht '767 patent fails to disclose or suggest at least the feature of liquid material discharged from the nozzle of a head for forming a film on a substrate, where the liquid material includes a heterocyclic compound having a boiling point equal to or greater than 170°C. Rather, Applicants submit that the Specht '767 patent merely discloses ink compositions such as Type A, Type B and Type C, where the boiling point of the THF in each of these Types is around 65 degrees centigrade (see, col. 3, line 57 to col. 4, line 5). Nowhere is the Specht '767 patent understood to disclose or suggest any heterocyclic compound having a boiling point larger than 170 degrees centigrade.

Applicants have reviewed the other art of record and believe that the present claims are allowable over the prior art, alone or in any combination.

For the above reasons, Applicants submit that claims 1 and 11 are allowable over the cited art.

Claims 12-18 depend from claim 11, and are believed allowable for the same reasons. Moreover, each of these claims recites additional features in combination with the features of base claim 11, and is believed allowable in its own right. Individual consideration of the dependent claims respectfully is requested.

Conclusion

Applicants believe that the present Amendment is responsive to each of the points raised by the Examiner in the Official Action, and submit that the application is in condition for allowance. Favorable consideration of the claims and passage to issue of the application at the Examiner's earliest convenience earnestly are solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,

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JAO:CPW/rle

Attachment:
Notice of Non-Compliant Amendment

Date: March 1, 2006

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